

The State of Working Massachusetts 2010

OVERVIEW

Like the rest of the nation, the Commonwealth is struggling to emerge from the worst economic crisis since the Great Depression. Nationally the economy has lost a larger share of its jobs than in any downturn since the Depression, and it is taking longer to regain the lost jobs than in any of our recent economic recoveries.¹ Massachusetts has not escaped this national crisis. But we have weathered it better than most states.

During this crisis Massachusetts lost a smaller share of jobs than most states, experienced better trends in wages and incomes than most of the nation, and did not experience a discernable increase in poverty.² It is impossible to know definitively why our state's economy has outperformed the nation during this period. But when we look back over the last 30 years, we can see significant trends that allowed the Massachusetts workforce to enter this economic crisis in a strong position.

In 1979 Massachusetts was in the middle of the pack nationally in terms of wages and incomes, and was only modestly above the national average in terms of the educational attainment of the workforce. Over the past 30 years, our state has changed dramatically. The percentage of our workforce with a four-year college degree has increased by 95 percent. As a result we now have a larger percentage of our workforce with a college degree (43 percent) than any other state in the nation. Not surprisingly, as we have built the best-educated workforce in the nation, we have become one of the highest-income states in the nation. Average incomes have grown more than twice as quickly in Massachusetts as in the nation as a whole and wages have grown more rapidly than in any other state (although wage growth nationally has been slower than in prior periods in our nation's history).³

The years ahead will pose enormous fiscal and economic challenges for Massachusetts and for the nation. Policymakers and citizens engaged in policy debates will face very difficult choices. But as

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ABOUT THE DATA

The Census Bureau's data on poverty and incomes derive from two main sources: the Current Population Survey (CPS) and the American Community Survey (ACS). The CPS is the official source for national poverty and income data. However, the ACS is based on a far larger sample and is thus able to provide better estimates at the state and sub-state levels. For this reason, we use ACS data, when available, and other data sources when the ACS survey does not provide data on a particular topic.

¹ *MassBudget*, "Facts At A Glance: Jobs and the Massachusetts Economy on Labor Day 2010." <http://massbudget.org/doc/751>

² *MassBudget*, "Facts At a Glance: No Significant Change in Massachusetts Median Household Income in 2009." September 28, 2010. <http://massbudget.org/doc/760>

³ Economic Policy Institute, "State of Working America 2008/2009." <http://www.stateofworkingamerica.org/tabfig.html>

hard as the choices we face are, we in Massachusetts also have very significant advantages that can serve as the foundation of a strong and vibrant state economy as our national economy recovers.

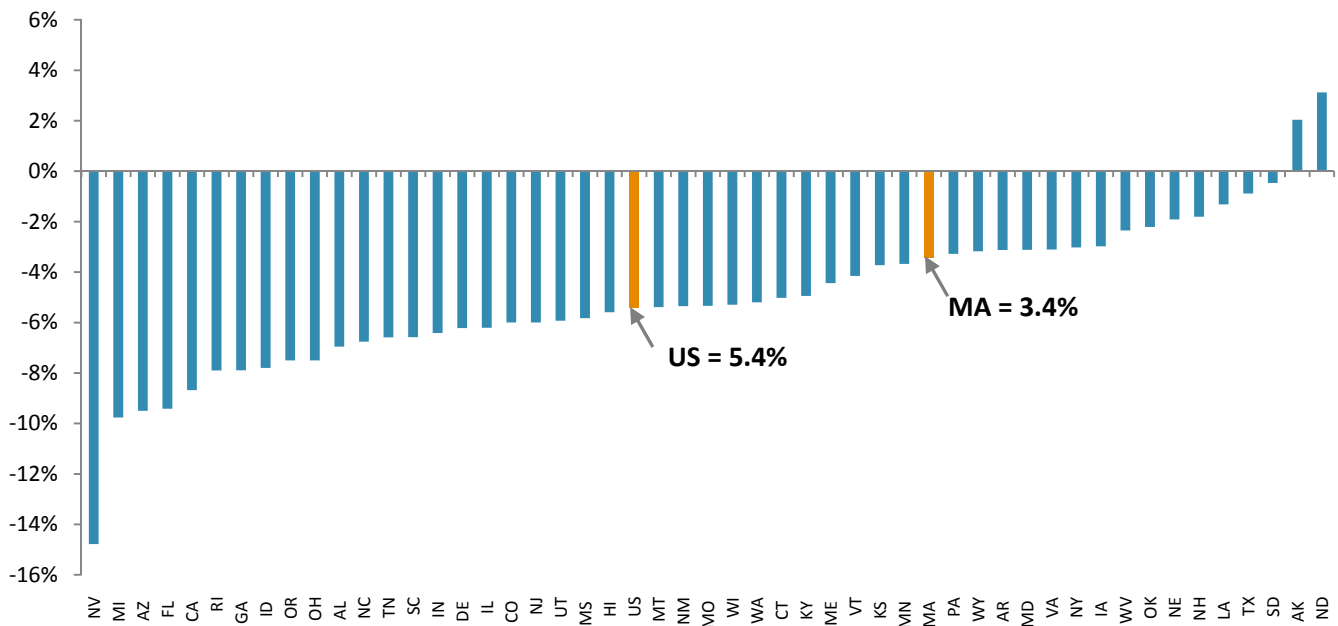
To build an economy that promotes growth and broadly shared prosperity requires both confronting our challenges and building on our strengths. This paper describes the State of Working Massachusetts in 2010, examining the severity of the recession and its impact on people in Massachusetts and also the longer-term trends and characteristics of the Massachusetts workforce that likely have played a significant role in allowing our state to outperform the nation.

JOBS

As noted, the last several years have been, by many measures, the most economically challenging period America has faced since the Great Depression. Over the last 35 months, since the onset of the Great Recession, the US has lost 7.4 million jobs, or 5.4 percent of the jobs that existed just prior to the 2007 collapse. The Commonwealth, meanwhile, has lost 113,000 jobs. While each of these lost jobs represents a real hardship for some individual worker, it also is the case that Massachusetts is performing better by this measure than much of the rest of the US. Relative to the number of jobs present just prior to the 2007 collapse, Massachusetts has lost a notably smaller share of its jobs, some 3.4 percent.

Figure 1. At 35 Months from Onset of 2007 Recession, MA Has Lost A Smaller Percentage of Jobs Than Most Other States

Percent Change in Number of Jobs, Dec. 2007 to Nov. 2010

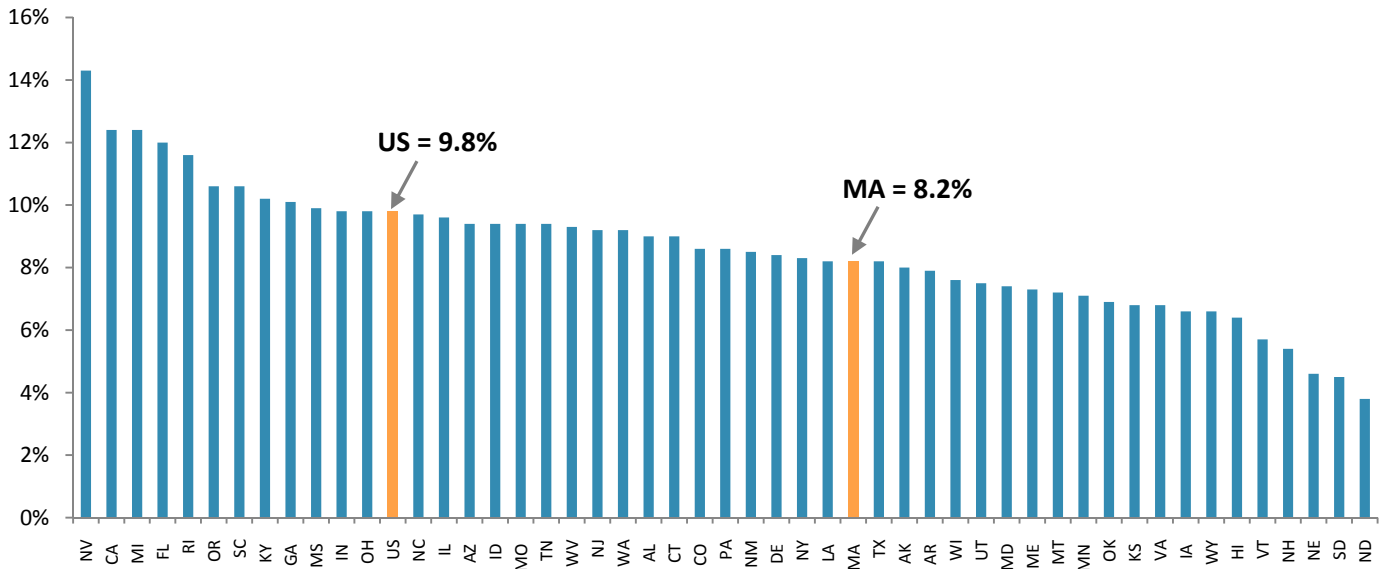


Source: Economic Policy Institute analysis of US Bureau of Labor Statistics data, November 2010

UNEMPLOYMENT

The current economic downturn — often, and accurately, referred to as the Great Recession — has produced, by many measures, the worst economic conditions in the United States since the Great Depression. Like the rest of the nation, workers in Massachusetts have been hit hard. Still, even under these very challenging circumstances, the Massachusetts economy has fared better than most other states, outperforming the U.S. average by a considerable margin. In 2009, Massachusetts had an unemployment rate (8.2 percent) well below the national average (9.8 percent).

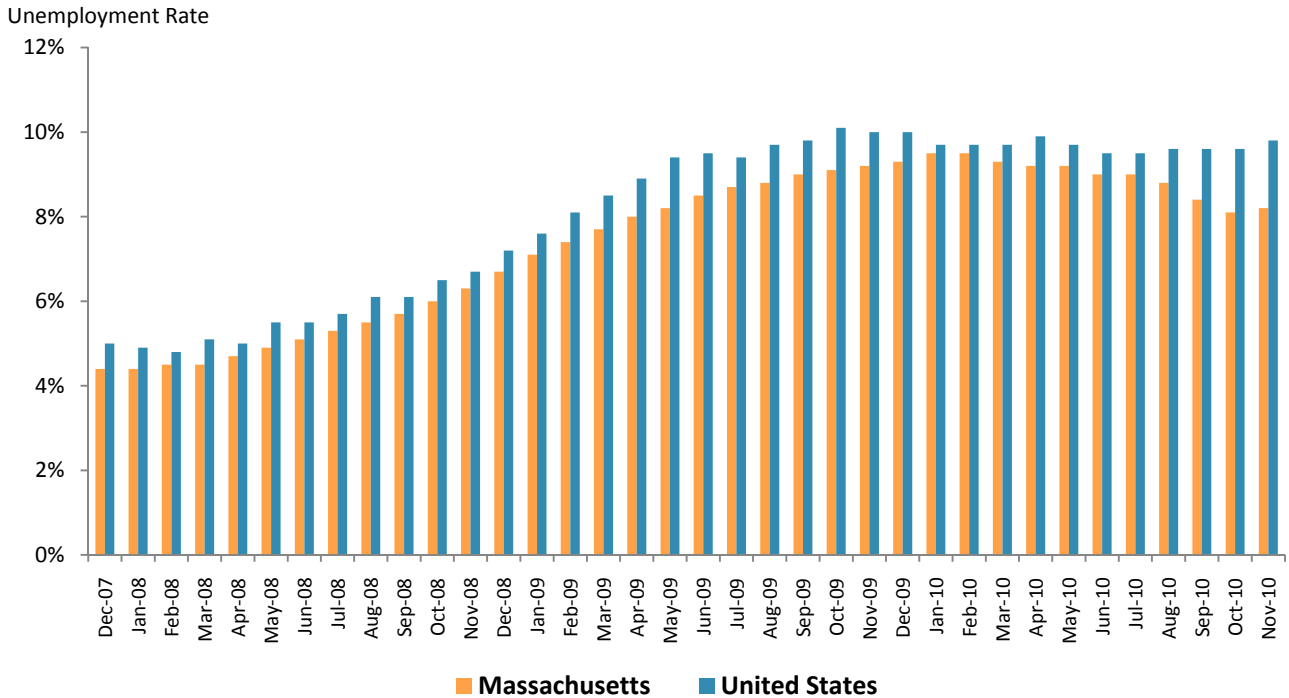
Figure 2. 35 Months After Onset of 2007 Recession, Massachusetts Unemployment Rate Remains Below the U.S. Average



Source: Economic Policy Institute analysis of US Bureau of Labor Statistics data, November 2010.

Looking at unemployment rates over a longer period, from the onset of the Great Recession (December 2007) to the present, Massachusetts has consistently maintained a rate well below the US average. Even as the national economy has returned to modest growth, however, unemployment still remains high, both nationally and in Massachusetts. Nevertheless, over the last several months as the weak economic recovery progresses, the gap between the US and Massachusetts unemployment rates in fact has widened (see Figure 3 below).

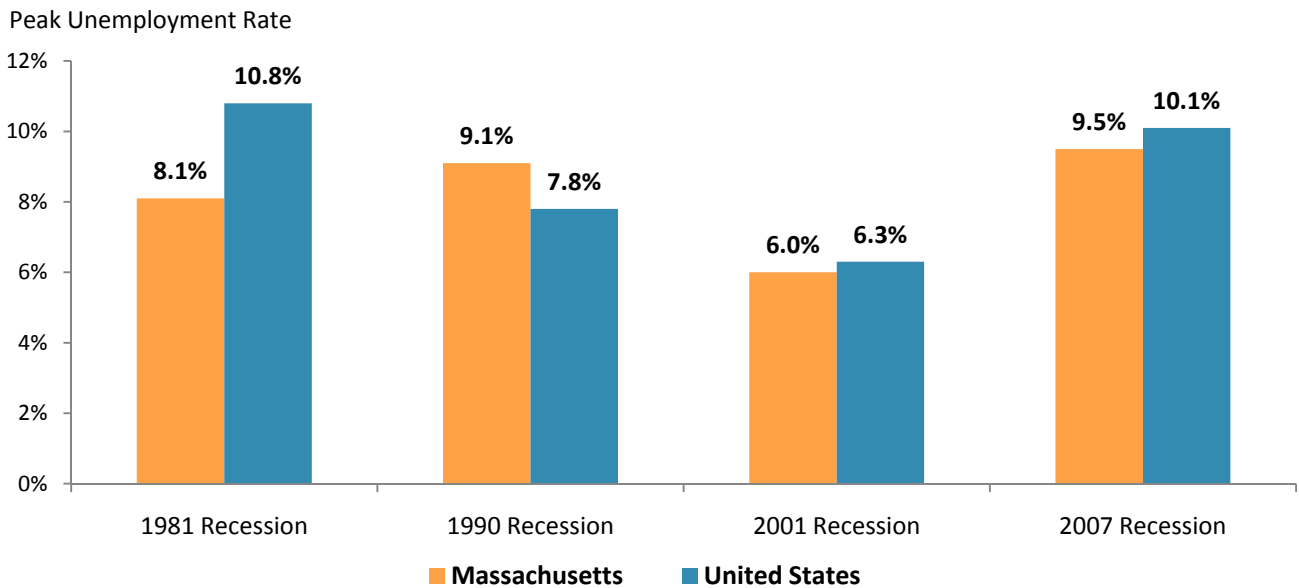
Figure 3. During The Current Economic Downturn, Massachusetts Has Had Lower Unemployment Rates than U.S.



Source: Economic Policy Institute analysis of US Bureau of Labor Statistics data, November 2010

Looking more broadly at unemployment rates in Massachusetts over the last 30 years, we see that in three of the last four recessions, Massachusetts has kept its peak unemployment rate below that of the US.

Figure 4. During Last Four Recessions, Peak Unemployment Typically Was Lower in Massachusetts Than in U.S.

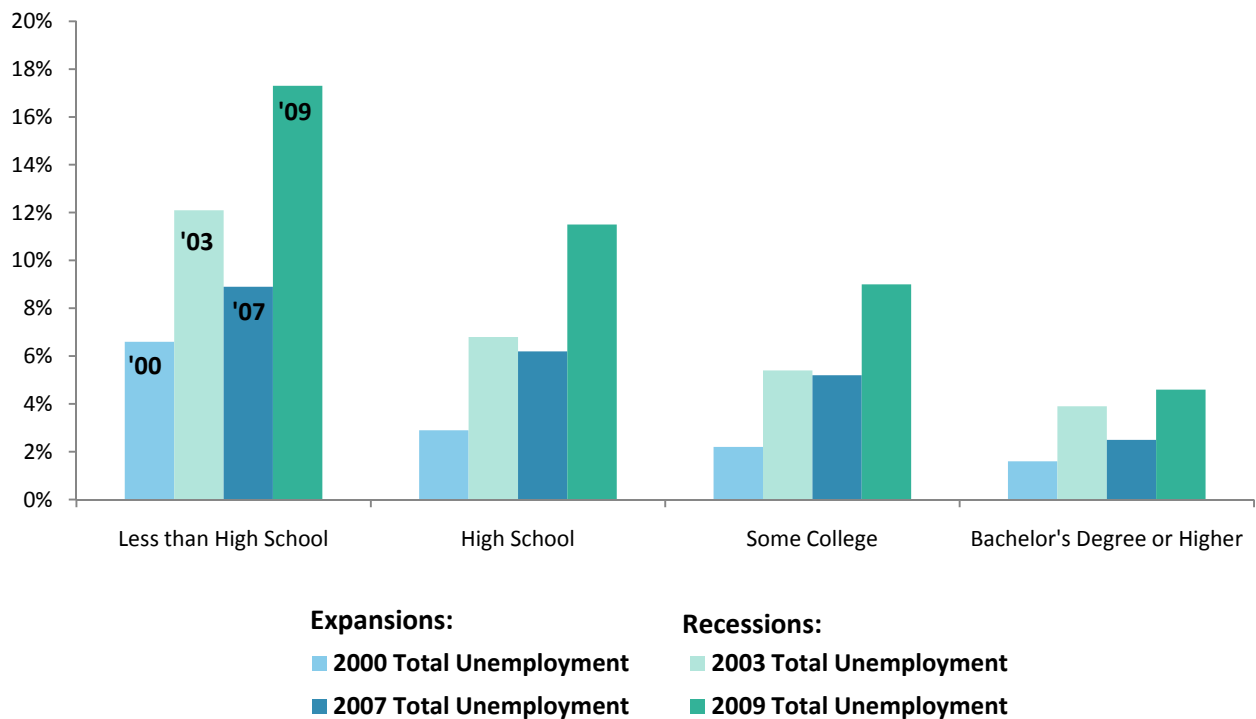


Source: EPI analysis of US Bureau of Labor Statistics data, November 2010

While Massachusetts workers overall have experienced lower unemployment rates than U.S. workers generally, substantial differences exist within the Massachusetts workforce. As would be expected, during recent economic expansions (2000 and 2007 data) and recessions (2003 and 2009 data), Massachusetts workers with higher levels of education have fared much better than have those with less education (see Figure 5 below). Of particular note are the very high levels of unemployment that have occurred during the most recent economic downturn among workers with limited education. Workers with less than a high school diploma have seen unemployment rates above 17 percent, close to four times as high as the rates for workers with a bachelor's degree or higher (4.6 percent).

Figure 5. MA Workers with More Education Have Had Lower Unemployment Rates in Recent Expansions (2000 and 2007 data) and Recessions (2003, 2009 data)

Unemployment Rate by Educational Attainment

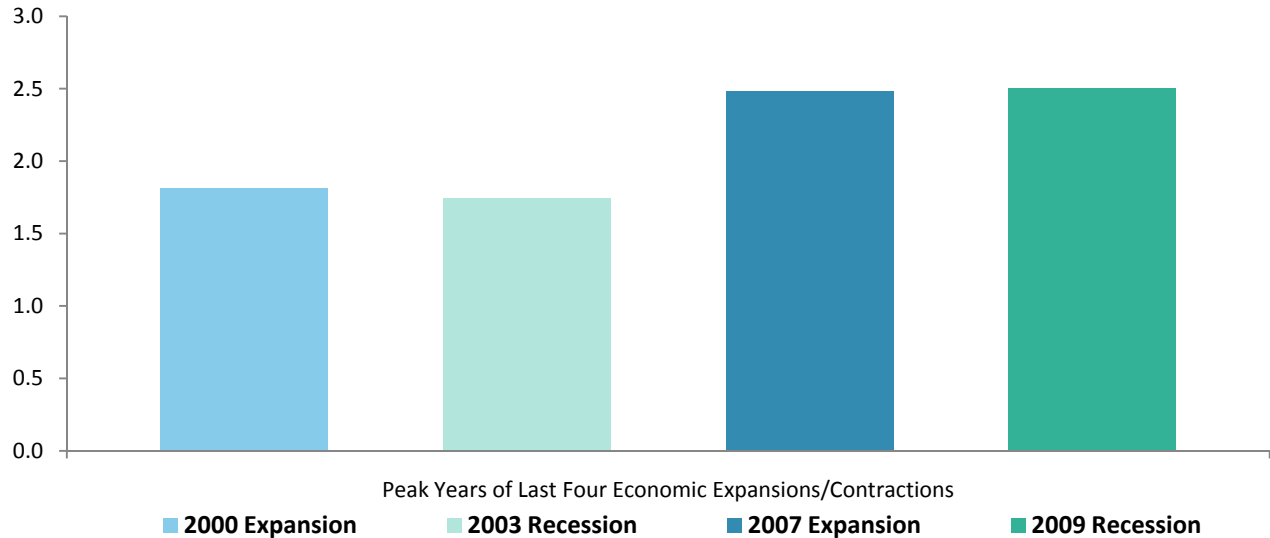


Source: Economic Policy Institute analysis of US Census Bureau data, Current Population Survey 2000-2009

The difference in unemployment rates for workers with differing levels of education also has become more extreme in recent years, during both economic expansions and recessions. Workers with less education are now experiencing notably higher rates of unemployment relative to better educated workers than was true in the past (Figure 6 below). In 2000, during the peak of an economic expansion, Massachusetts workers with a high school diploma enjoyed near full employment, experiencing unemployment rates only 1.75 times higher than the unemployment rates of workers with bachelor's (or higher) degrees. This ratio even dropped slightly during the peak of the next recession (2003 data). In the expansion that followed (2007 data) and at the peak of the current downturn (2009 data), however, this ratio jumped considerably; Massachusetts workers with high school diplomas saw unemployment rates two-and-a-half times higher than those workers with college (or higher) degrees.

Figure 6. Massachusetts Workers with High School Diplomas Now Have Unemployment Rates Twice as High as Rates for Bachelor's Degree Holders

Ratio of Unemployment Rate for Workers with High School Diploma to Rate for Workers with Bachelor's Degree or Higher

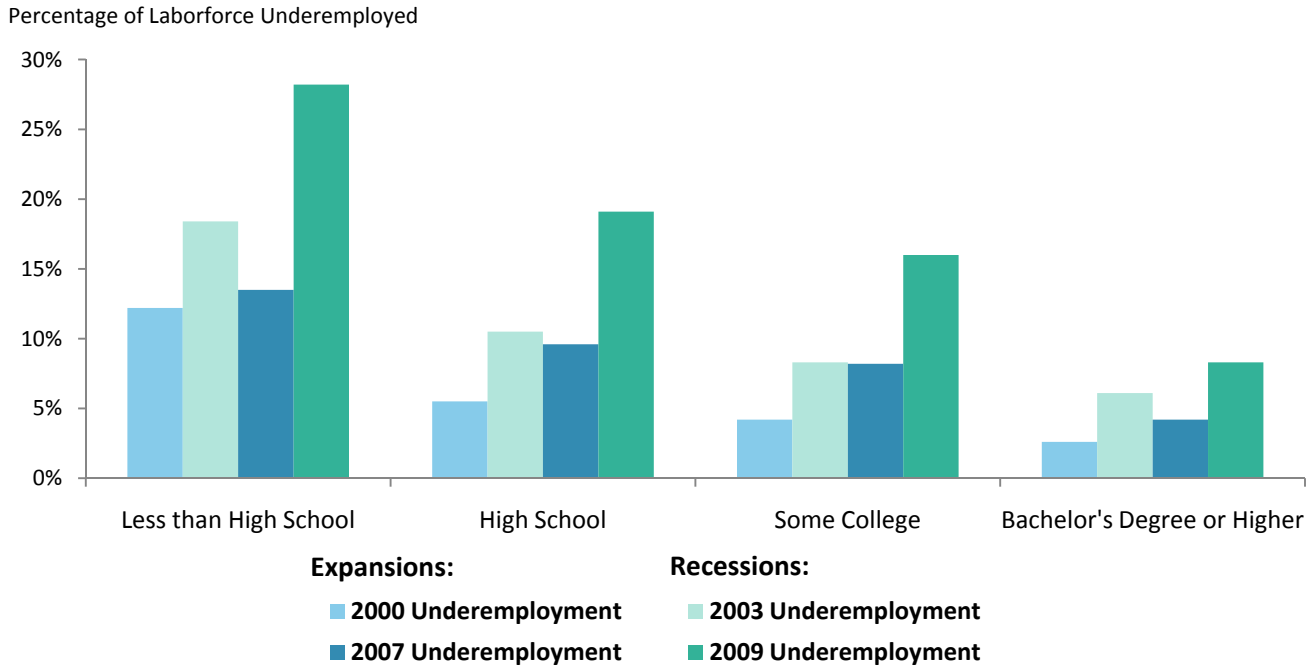


Source: Economic Policy Institute analysis of US Census Bureau data, Current Population Survey 2000-2009

While levels of unemployment have been high during this latest economic downturn, levels of *underemployment* have been *very* high.⁴ For Massachusetts workers with a high school degree, underemployment rates during the current downturn have approached 20 percent, while the rate for workers with less than a high school diploma has exceeded 25 percent, or more than 1-in-4 such workers.

⁴ "Underemployed" is a broader category that includes the unemployed, as well as those working only part-time because full-time work is unavailable. It also includes workers that are only "marginally attached" to the workforce, working only sporadically due to limited job opportunities in the economy.

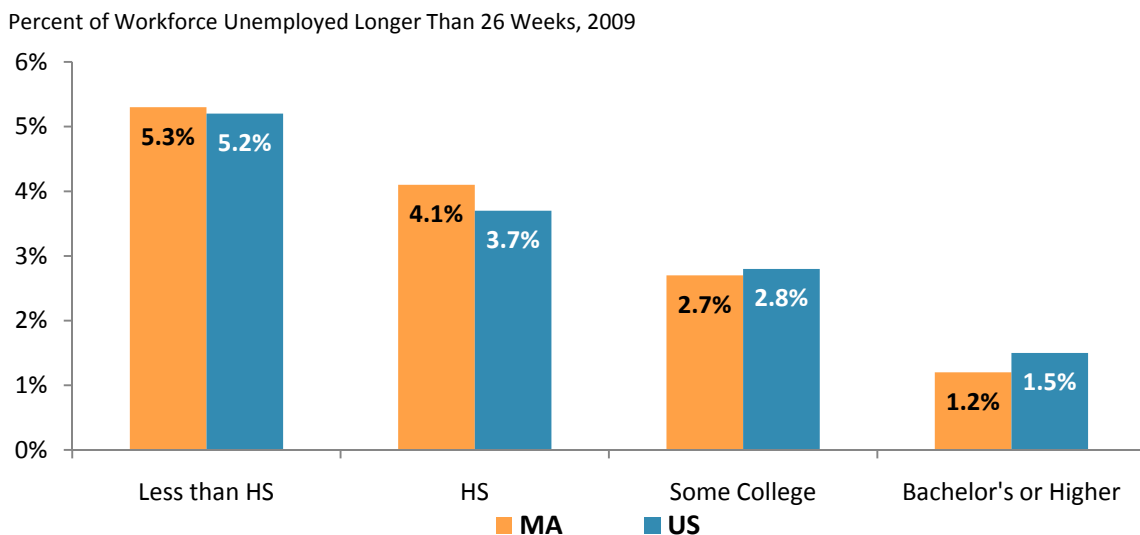
Figure 7. Massachusetts Workers with More Education Have Had Lower Underemployment Rates in Recent Expansions and Recession



Note: The category "underemployed" includes unemployed and marginally attached workers, as well as those working part-time due to limited opportunities for full-time work.
 Source: Economic Policy Institute analysis of US Census Bureau data, Current Population Survey 2009

Another issue faced by many workers both around the country and here in the Commonwealth is the growing length of time many workers remain unemployed once they lose their jobs. Following the general trend of unemployment, the long-term unemployment rate (the share of the workforce enduring periods of unemployment that exceed 26 weeks) is much higher for workers with less education, both in the US and in Massachusetts (see Figure 8 below).

Figure 8. Long-Term Unemployment Higher for Workers with Less Education

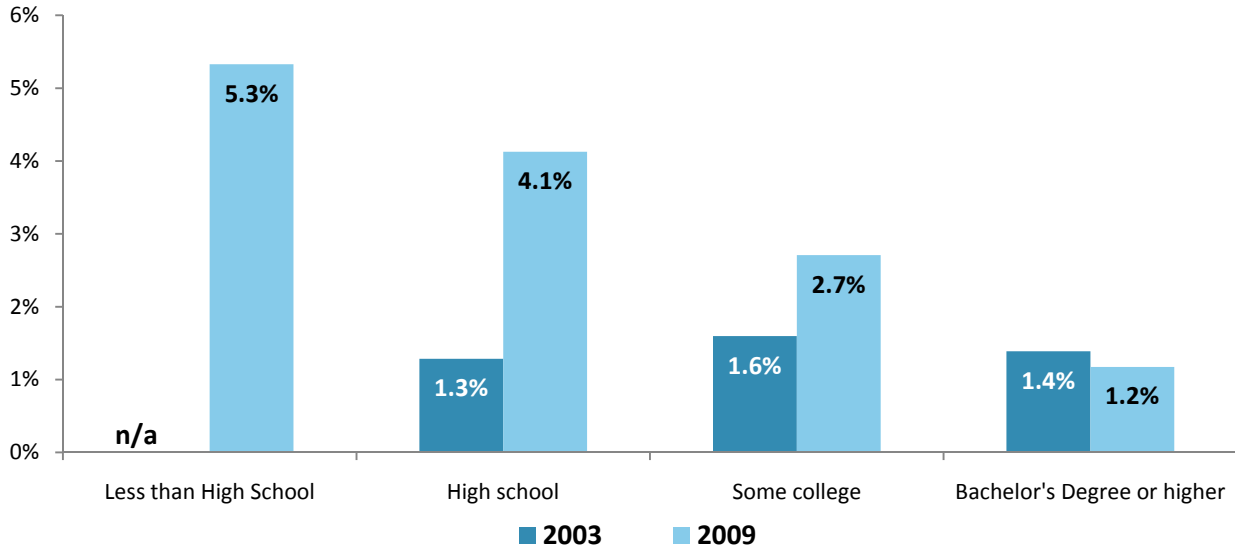


Source: Economic Policy Institute analysis of US Census Bureau data, Current Population Survey 2009

Moreover, the differences in long-term unemployment rates among workers with differing levels of education have grown substantially since the last recession. Whereas long-term unemployment rates were similar for all Massachusetts workers in 2003 -- regardless of educational level -- in the current downturn, workers with bachelor's degrees are far less likely to be unemployed for more than 26 weeks than are less educated workers.

Figure 9. Unlike in 2003, in Current Downturn, Long-term Unemployment Rates Differ Widely by Educational Level

Share of Massachusetts Workforce Unemployed Longer Than 26 Weeks



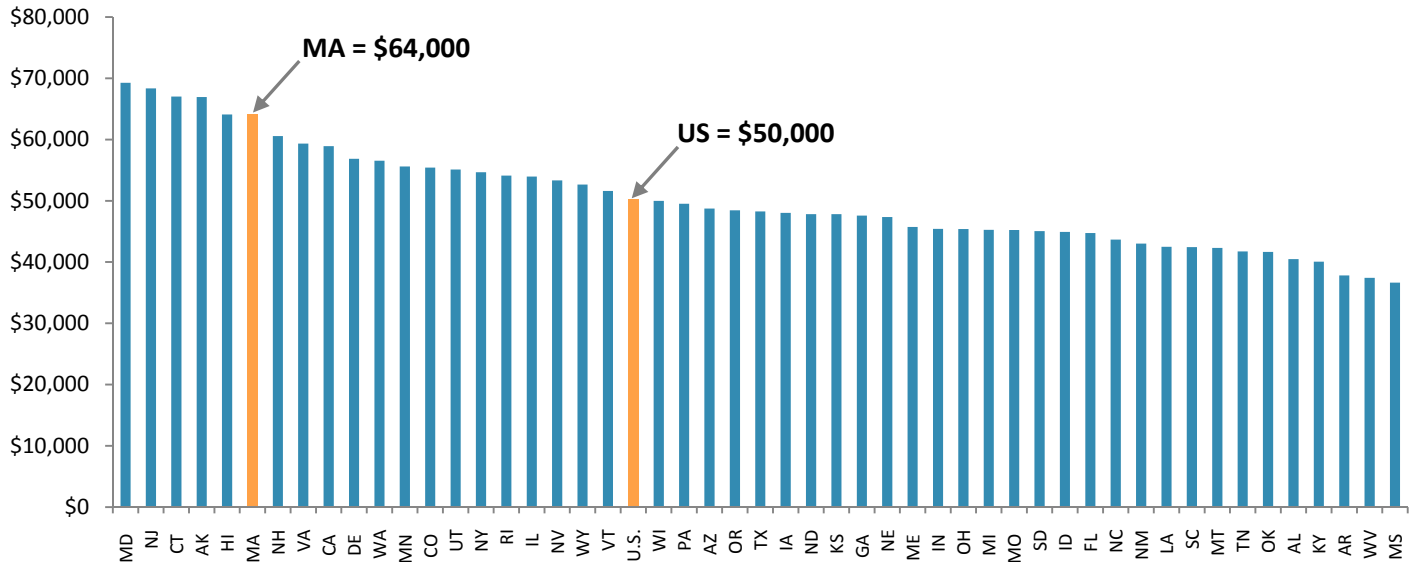
Note: Data for 2003 for this measure, for this subset of workforce not available

Source: Economic Policy Institute analysis of US Census Bureau data, Current Population Survey, 2003 & 2009

INCOME & WAGES

According to the American Community Survey (ACS), Massachusetts' median household income in 2009 was \$64,081, one of the highest in the nation and roughly \$14,000 greater than the national average. Though this is a slight decline from 2008 (about \$860, or 1.3 percent), it was not a statistically significant change from 2008. For the country as a whole, ACS data do show a statistically significant decline in median household between 2008 and 2009, dropping by 2.9 percent, or about \$1,505.

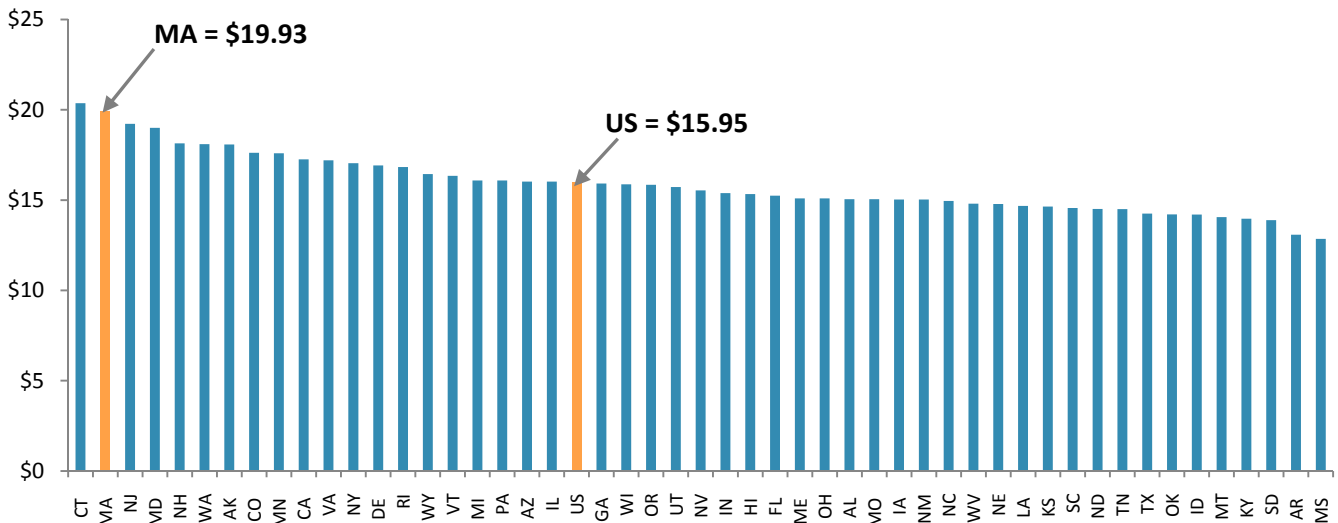
Figure 10. Massachusetts Median Household Income Among Highest in the Nation, 2009



Source: 2009 American Community Survey 1-Year Estimates.

In terms of wages, the Current Population Survey (CPS) reports that Massachusetts also has one of the highest median hourly wages in the nation, at \$19.93 per hour in 2009 compared to \$15.95 nationally. The CPS reports that in 2008 the median hourly wage for Massachusetts was \$19.02.

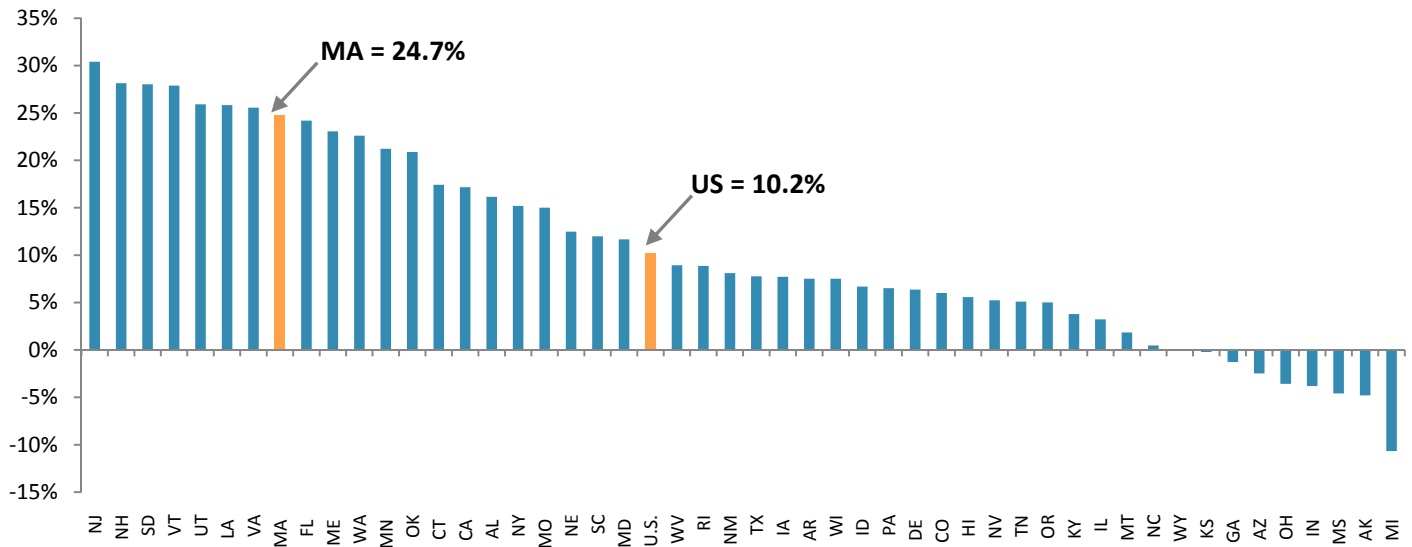
Figure 11. Massachusetts Median Hourly Wage Among Highest in the Nation, 2009



Source: Economic Policy Institute analysis of Current Population Survey Outgoing Rotation Group data.

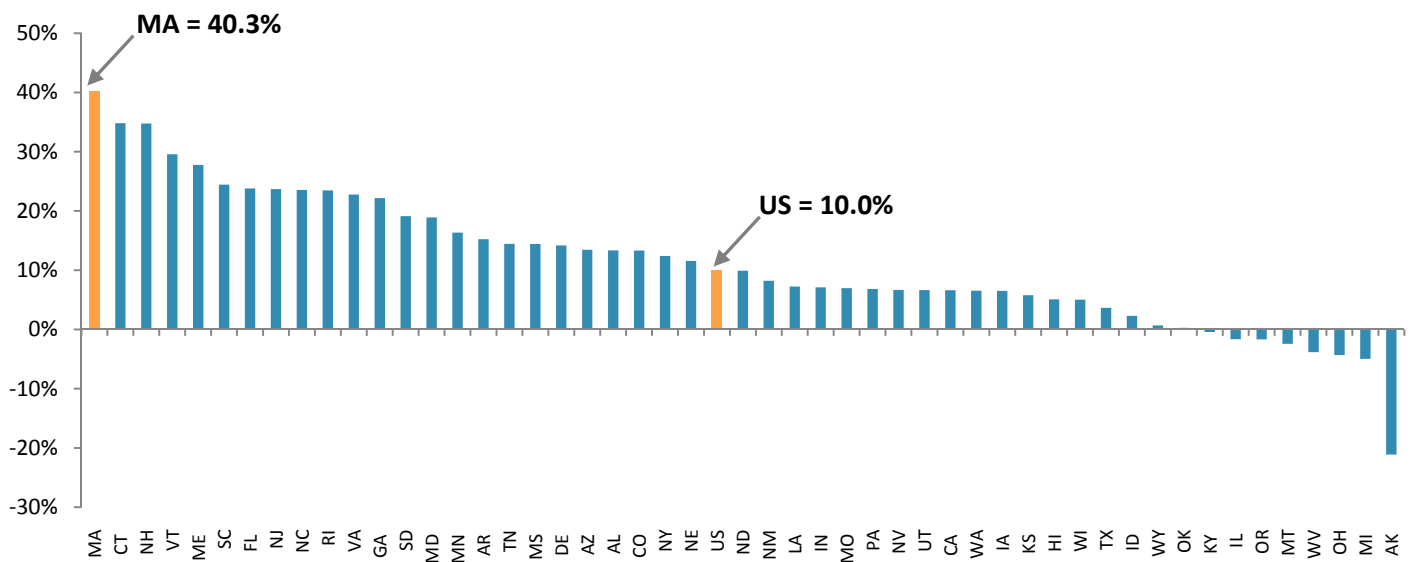
Both wages and income in Massachusetts have seen among the highest increases in the nation over the past several decades. Median household income in Massachusetts, for instance, increased by 25 percent between 1979 and 2009 – among one of the highest increases across all states. Comparatively, the national median household income increased 10 percent during this period. Massachusetts had the highest increase in median hourly wages between 1979 and 2009, of about 40 percent – much greater than the 10 percent increase nationally.⁵

Figure 12. Massachusetts Change in Median Household Income Among Highest in Nation, 1979-2009



Sources: 1979-1983 data from Economic Policy Institute analysis of CPS. 1984-2009 from Census.

Figure 13. Greatest Change in Median Hourly Wage Occurred in Massachusetts, 1979-2009



Sources: 1978-1983 from Economic Policy Institute analysis of Current Population Survey. 1984-2009 from Census.

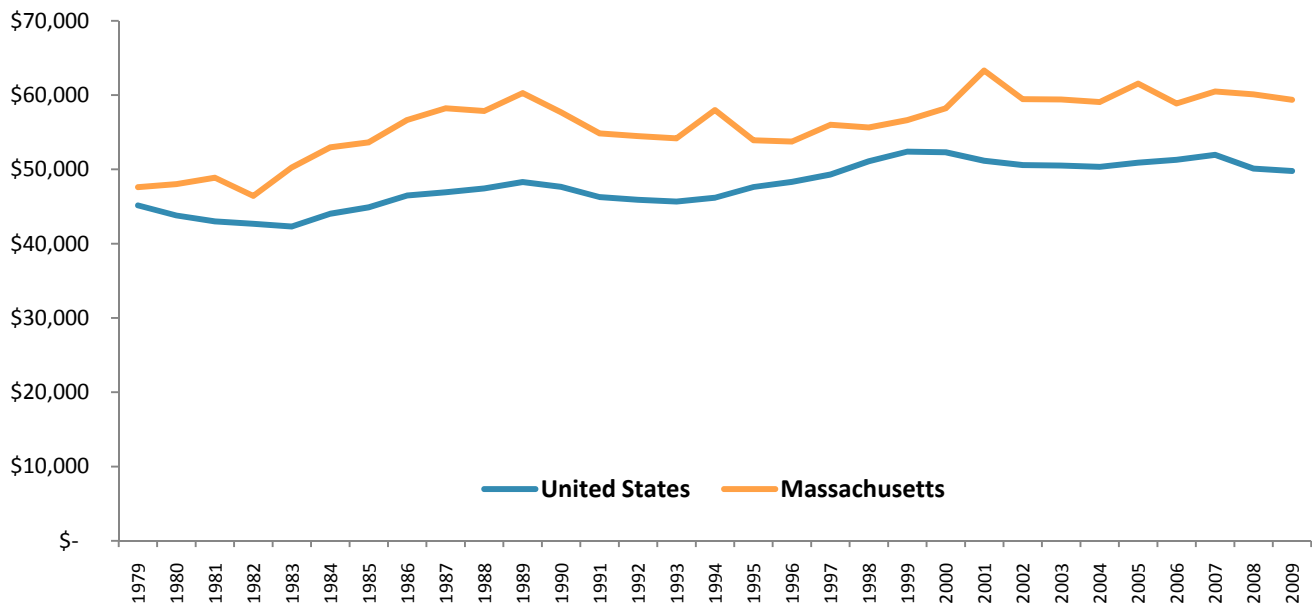
⁵ All historical data are presented in this report as adjusted for inflation.

One important consideration when comparing income and wages is factoring cost differences between states, as there is significant variation among states that has an effect on the value of wages and income. This can be done by adjusting wage and income estimates using the Comparable Wage Index (CWI), which accounts for regional variations and provides a more fair comparison across states. After adjusting by the CWI, Massachusetts' median household income is still relatively high among states, ranking in the top 10 highest incomes (though it does not rank as high as the unadjusted income). Similarly, the state's median hourly wage, after adjusting using the CWI, still ranks among the highest in the nation (again, it is not as high as the unadjusted wage).

Both median household income and median hourly wages for Massachusetts started off in 1979 relatively close to the national average and diverged in the subsequent decades. In 1979, median household income was \$47,605, which was modestly higher than the national median household income of \$45,157. Since then, incomes in Massachusetts have grown at an annual average growth rate of 0.7 percent, while nationally incomes grew at a slower rate of 0.3 percent. As a result, by 2009 the Massachusetts median household income of \$59,373 was \$9,596 higher than the national median household income of \$49,777.⁶

Median hourly wages in the state were slightly below the nation in 1979, at \$14.21 and \$14.50 respectively. Since then, growth of the median hourly wage in the Commonwealth far outpaced the nation. The median hourly wage in Massachusetts grew at an average annual rate of 1.1 percent, compared to an average annual rate of 0.3 percent nationally. By 2009, the median hourly wage in Massachusetts rose to \$19.93, almost \$4 greater than the national wage of \$15.95.

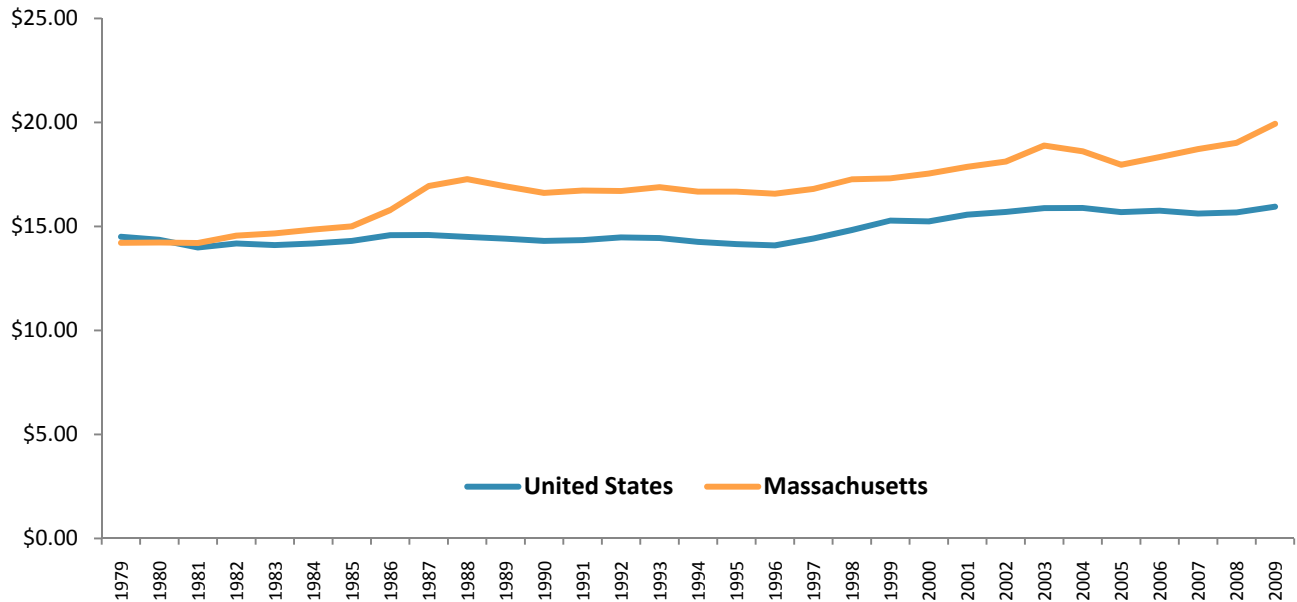
Figure 14. Growth in Massachusetts Median Household Income Exceeds U.S., 1979-2009



Sources: 1978-1983 from Economic Policy Institute analysis of CPS. 1984-2009 from Census.

⁶ The figures presented here differ from those presented in Figure 10 because we have used CPS data in this instance, instead of ACS data, which were used in Figure 10. Because the ACS did not exist prior to 1996, we use CPS data for historical comparisons.

Figure 15. Growth in Massachusetts Median Hourly Wage Exceeds U.S., 1979-2009



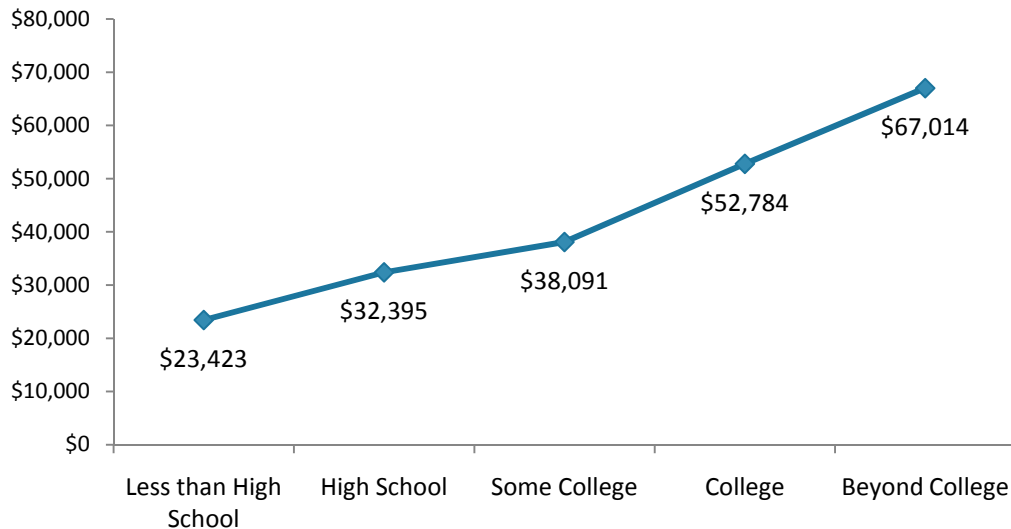
Sources: Economic Policy Institute analysis of Current Population Survey, Outgoing Rotation Group data.

EXAMINING EDUCATIONAL ATTAINMENT AND WAGE TRENDS

One explanation for the Commonwealth’s relatively high median household income and median hourly wage could be the comparatively higher educational attainment of the state’s workforce. Census data show that earnings increase with a worker’s educational attainment. In Massachusetts, workers with a college degree earn wages that are 63 percent higher than workers with a high school diploma, while those with a degree beyond college earn more than twice as much as those with only a high school degree.

Figure 16. Annual Earnings Increase with Higher Education Levels

Median Annual Earnings by Educational Attainment, Massachusetts

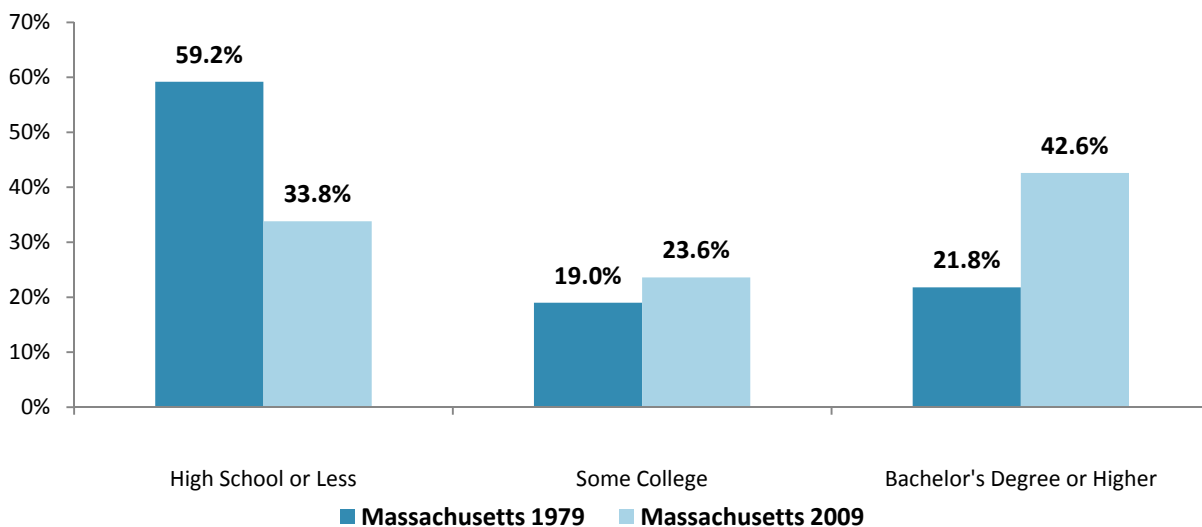


Source: 2006-2008 American Community Survey 3-Year Estimates

The workforce in Massachusetts is comprised of a greater portion of college-educated workers (43 percent), than the nation (31 percent) and a smaller portion of workers with a high school diploma or less (34 percent), compared to the nation (40 percent). It would then make sense that the median hourly wage in Massachusetts would be higher, given the correlation between education and wages. The portion of workers with some college education⁷ in Massachusetts is slightly less than the nation, at 24 percent and 29 percent respectively – an indicator that is likely to become more important in policy choices relating to post-secondary education, as changes in the labor market are projected to demand more workers with these “middle skills.”⁸

Figure 17. Greater Concentration of College-Educated Workers in Massachusetts

Educational Attainment, 2009



Sources: Economic Policy Institute analysis of Current Population Survey.

As we have seen, median hourly wages increased in Massachusetts between 1979 and 2009. One likely explanation for this increase was the shift in the Commonwealth’s workforce between these years toward a more highly educated workforce. The chart above shows that the percentage of workers with an education level of high school or less decreased, while those with some college or at least a bachelor’s degree increased. Thus, the workforce in 2009 included more workers with the higher levels of education that generally correlate with higher wages, compared to the workforce in 1979.

Along with the shift in the workforce toward more college-educated workers, there were also wage increases for workers at all levels of education, as shown below. Nationally workers with lower levels of education saw only minimal increases (2 percent for those with some college), or in the case of those with a high school diploma or less, a wage decrease of 7 percent. Both in the U.S. and in the state, the greatest wage increase occurred for workers with a master’s degree or higher – 32 percent and 40 percent increases respectively. These data also indicate that in addition to Massachusetts benefiting

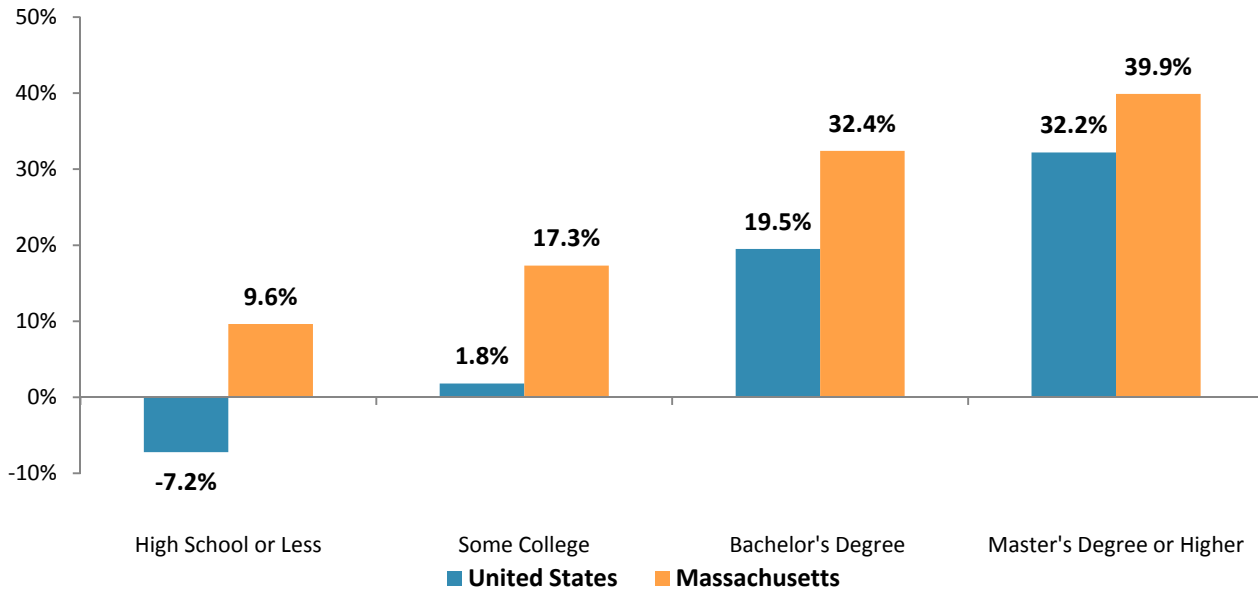
⁷ “Some College” includes vocational training, associate’s degrees, and those who have attended college but have not earned any degree or certification.

⁸ See “Massachusetts’ Forgotten Middle-Skills Jobs” by Skills2Compete- Massachusetts: http://www.nationalskillscoalition.org/assets/reports/skills2compete_forgottenjobs_ma_2010.pdf. Also “Mismatch in the Labor Market: Measuring the Supply of and Demand for Skilled Labor in New England,” by Alicia Sasser, New England Public Policy Center: <http://www.bos.frb.org/economic/neppc/presentations/2010/sassermodeestino113010.pdf>.

from a larger share of its workforce achieving higher levels of education and the accompanying higher wages, Massachusetts workers at every level of education saw faster wage growth than the national average

Figure 18. Massachusetts Median Hourly Wage Increased Across Education Levels, 1979-2009

Median Hourly Wage by Educational Attainment



Sources: 1979-1983 data from Economic Policy Institute analysis of CPS. 1984-2009 from Census.

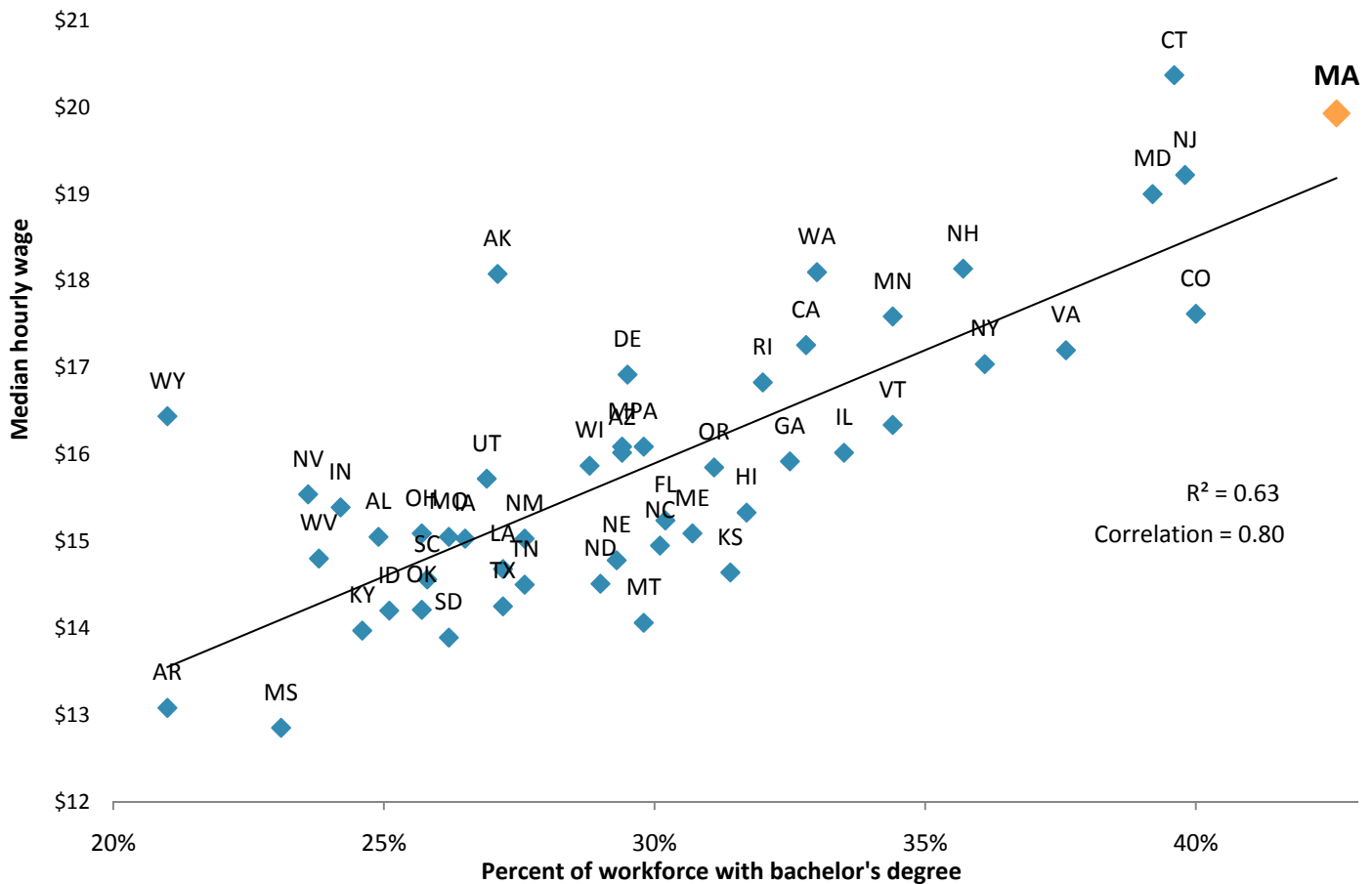
Using these data, we can also make 50 state comparisons and examine the relationship between the educational attainment of a state's workforce and wages earned. The scatter plot below shows that states with highly educated workforces tend to have higher wages. In 2009, Massachusetts had the most highly educated workforce in the nation earning the second-highest wages. Aside from a few state outliers, the graph shows that as the percentage of workers with bachelor's degrees increases their median hourly wage also rises.

This strong correlation does not prove that increasing the share of workers with a bachelor's degree automatically leads to higher wages. It is possible, for example, that the causation goes the other direction, with wealthier families being able to afford higher education for their children. In reality, it is likely that both dynamics happen simultaneously.

While this paper does not test directly the hypothesis that increasing the education of a state's workforce will in turn increase wages, there are strong reasons to believe this is the case; we know that at the individual level, gaining a bachelor's degree does increase one's earning potential. Given that the wages of an individual, on average, are higher if the individual has a higher level of education, it would make sense that wages statewide would be higher if a larger share of the population has a higher level of education. Furthermore, there is research that has tested this connection more rigorously. In 2006, the Federal Reserve Bank of Cleveland conducted a detailed study into the causes of income growth at the state level, and found that the knowledge base of a state's population, particularly the relative proportion of workers with advanced degrees, was the strongest determinant

of higher income levels.⁹ Their report synthesizes other research on the positive connection between education and income, explaining that highly educated workers tend to be more productive and more innovative, making their labor more valuable to employers. Additionally, highly educated workforces are better able to adapt to downturns and structural shifts in the economy, making their state economies more flexible on the whole.

Figure 19. Strong Correlation Between Education and Wages, 2009

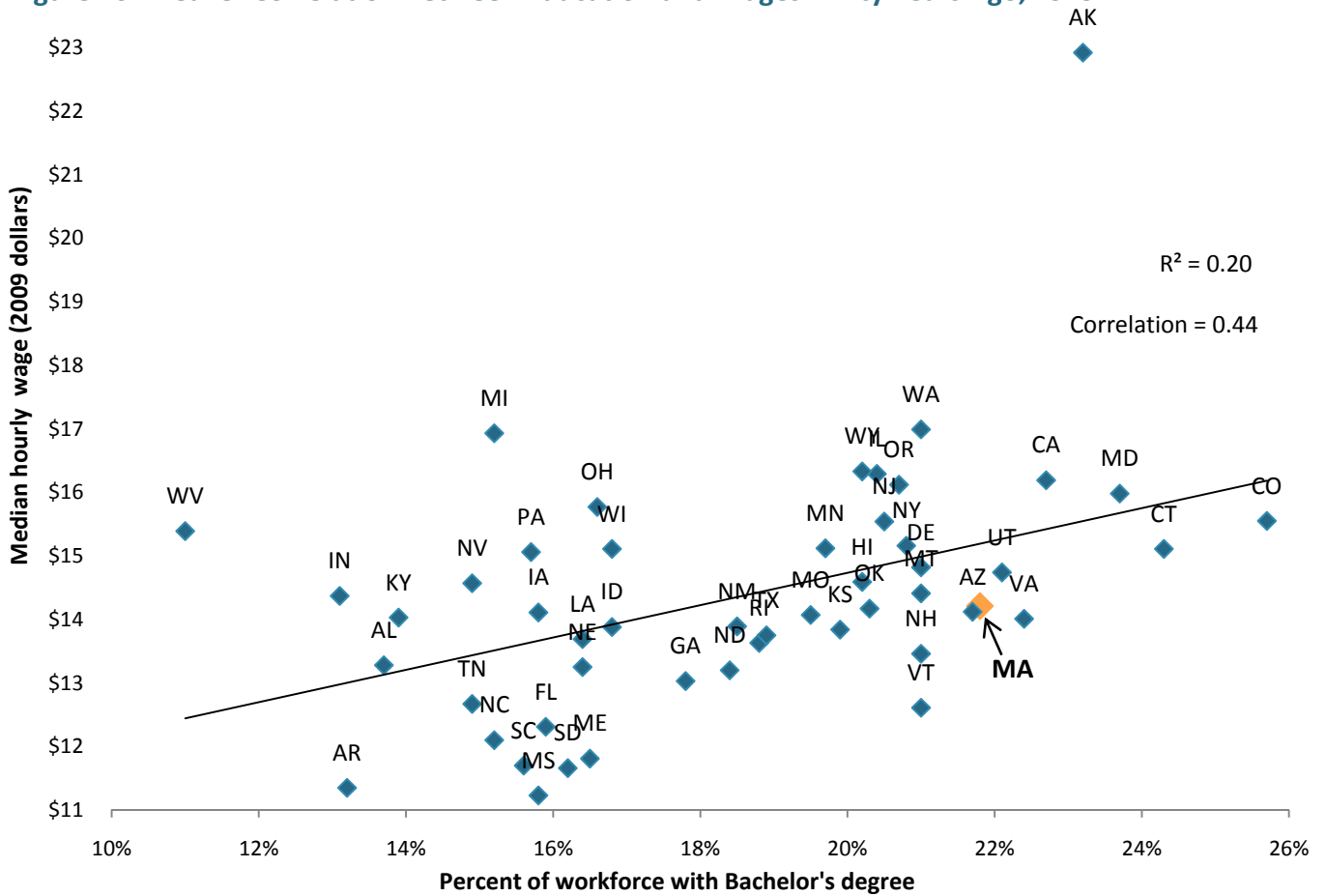


Source: Economic Policy Institute analysis of Current Population Survey.

By analyzing the same ACS and CPS data on college attainment and wages for 1979, we see a similar connection to that observed today, but one that was not nearly as strong. Over the intervening 30 years, the country has experienced a rapid shift away from manufacturing and towards a knowledge-based economy, placing an even greater premium on state workforces that are nimble and well-educated. All 50 states experienced growth in workers with bachelor's degrees over these 30 years—a 66 percent average increase—with Massachusetts experiencing the third-most pronounced increase. The proportion of the Massachusetts workforce with bachelor's degrees increased from 22 percent in 1979 to 43 percent in 2009, a 95 percent increase.

⁹ For more information, please see the Federal Reserve Bank of Cleveland's May 2006 Working Paper *State Growth Empirics: The Long-Run Determinants of State Income Growth*, by Paul W. Bauer, Mark E. Schweitzer, and Scott Shane, available online at: <http://www.clevelandfed.org/Research/Workpaper/2006/wp0606.pdf>

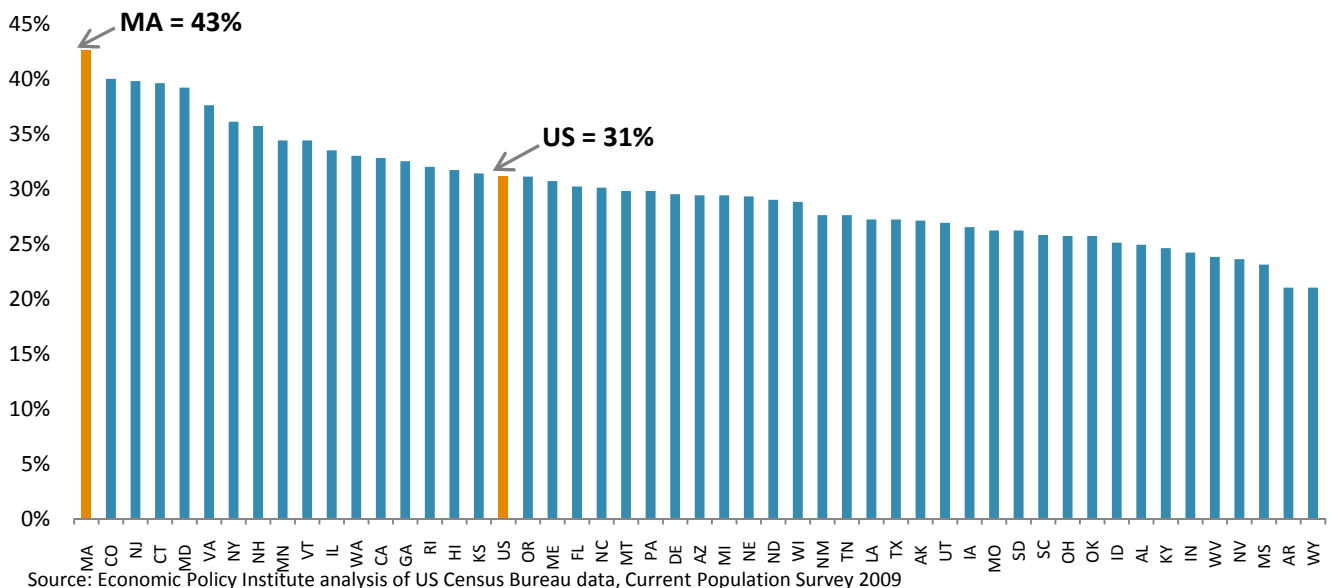
Figure 20. Weaker Correlation Between Education and Wages Thirty Years Ago, 1979



Source: Economic Policy Institute analysis of Current Population Survey.

Figure 21. Massachusetts Has the Most Highly Educated Workforce

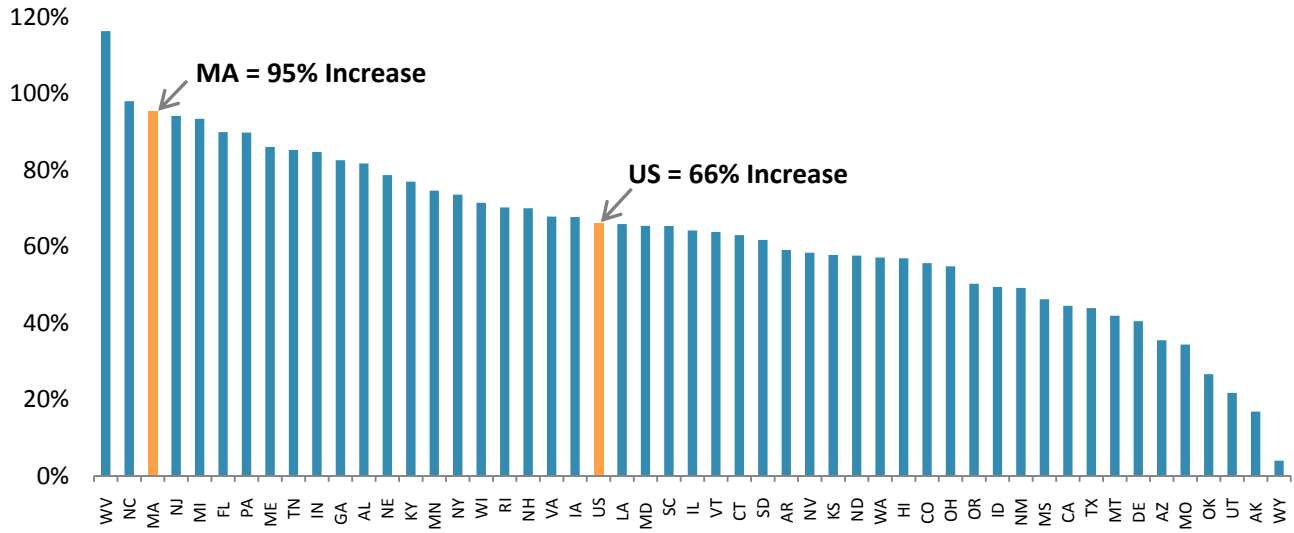
Percent of workforce with bachelor's degree, 2009



Source: Economic Policy Institute analysis of US Census Bureau data, Current Population Survey 2009

Figure 22. Massachusetts Among the Greatest Increase in Highly Educated Workers, 1979-2009

Percent change in share of workforce with bachelor's degree, 1979-2009



Source: Economic Policy Institute analysis of US Census Bureau data, Current Population Survey 1979 & 2009

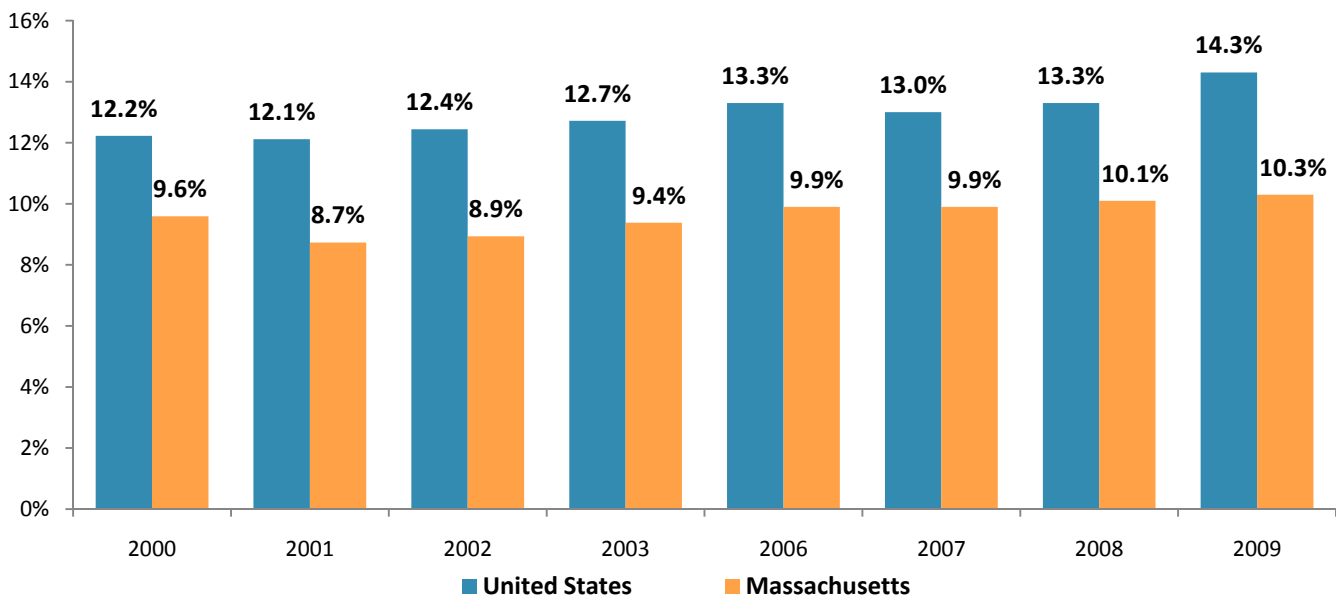
POVERTY

Despite the appearance of a small rise (0.2 percent) in the overall poverty rate in Massachusetts in 2009, the new figure (10.3 percent) is statistically indistinguishable from 2008 levels of 10.1 percent.¹⁰ (See our discussion of “statistical significance” in the Methodological Notes at the end of this document.)

The Census Bureau’s latest American Community Survey (ACS) data indicate that 600,000 to 650,000 people in Massachusetts lived in households that fell below the federal poverty threshold in 2009 (the threshold was set at \$21,756 for a four-person family with two children for 2009).

Figure 23. No Statistically Significant Change in The Overall Poverty Rate Occurred in Massachusetts, 2008 to 2009

Percentage of Population Living Below The Poverty Threshold



Note: Comparable data for 2004 and 2005 not available from US Census.

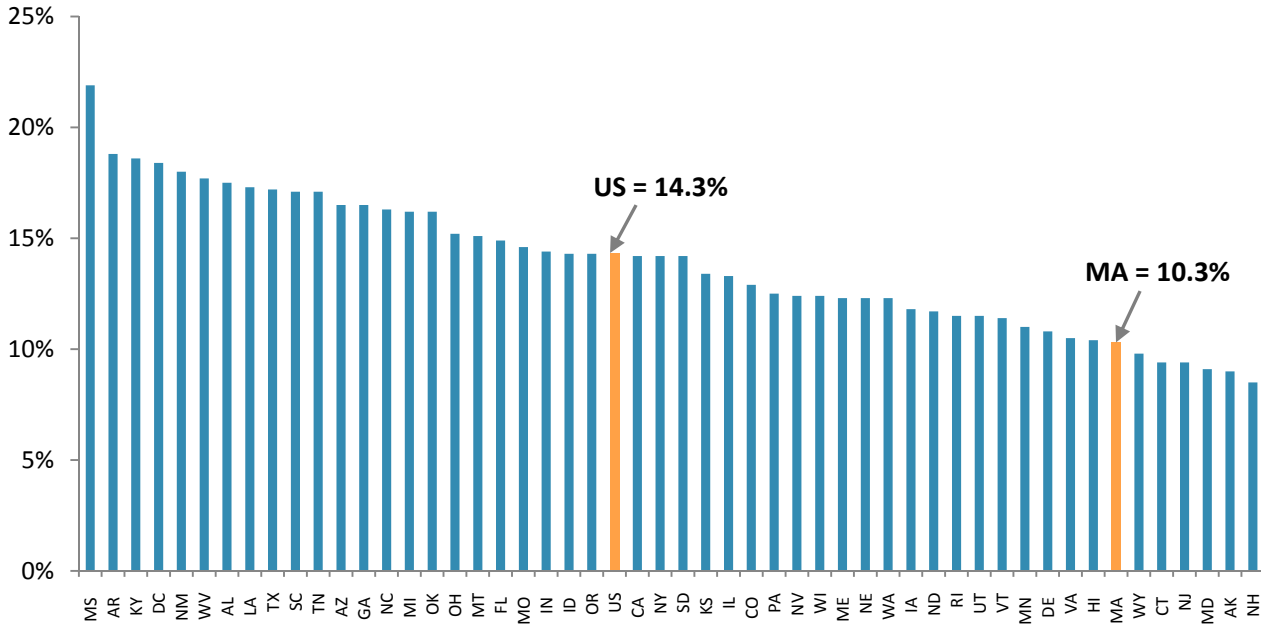
Source: Economic Policy Institute Analysis of US Census Bureau data, American Community Survey 2009.

According to ACS data, in 2009, Massachusetts had an overall poverty rate (10.3 percent) substantially below that of most other states (US average = 14.3 percent). Because of uncertainty about the precision of state-level estimates (due to smaller sample sizes at the state level) it is not possible to rank the states with precision. Nevertheless, it is clear that Massachusetts is among the 10 states with the lowest overall poverty rates in 2009. Mississippi unequivocally had the highest rate of overall poverty at 21.9 percent.

¹⁰ Because the ACS figures are based on a sample of the population, and because the sample size at the state level is not large enough to provide greater precision, this change is not considered “statistically significant” -- it is uncertain whether this reflects an actual change in the population as a whole (see Methodological Notes at the end of this document for further discussion).

Figure 24. Massachusetts Ranks Among The Ten States With The Lowest Poverty Rates

Percentage of Population Living Below The Poverty Threshold, 2009



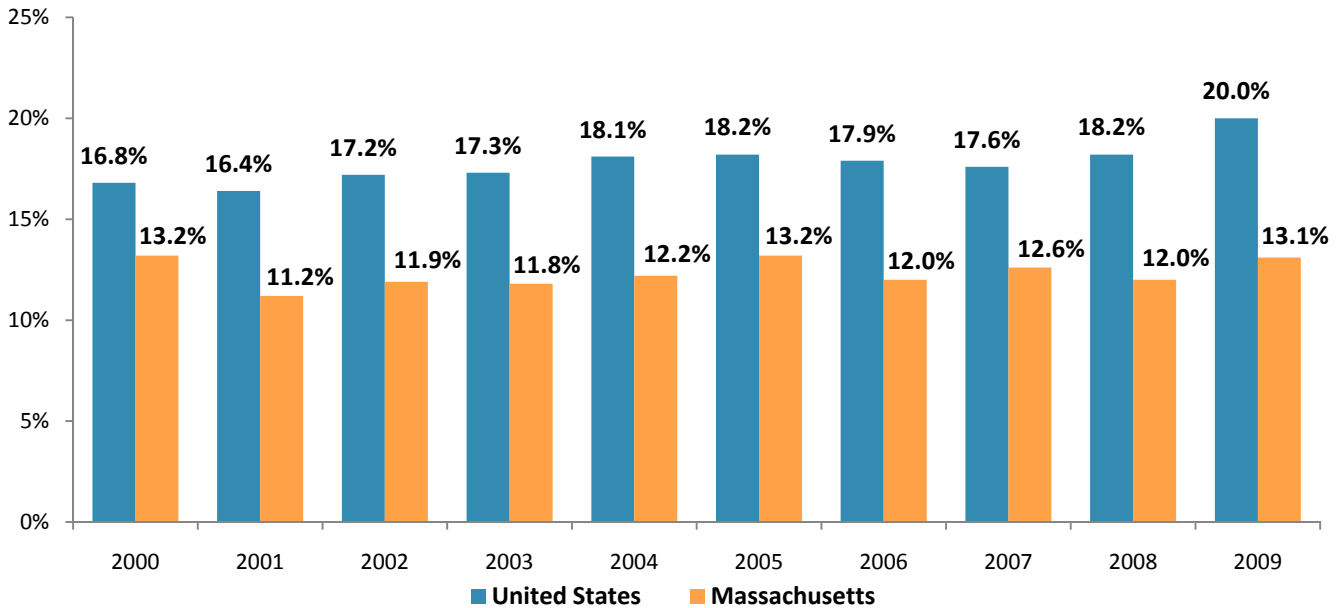
Source: US Census Bureau, American Community Survey 2009

The observed change from 2008 to 2009 in child poverty for Massachusetts also was statistically insignificant. Due to smaller state-level sample sizes – and the greater degree of uncertainty associated with these small sample sizes – it is not possible to say definitively that childhood poverty in Massachusetts increased (or decreased) in 2009.

ACS data indicate that the childhood poverty rate in Massachusetts stood at 13.1 percent in 2009. The Census estimates that of the 1.4 million children under age 18 in Massachusetts, there were some 185,000 children living in poverty in 2009. At the national level, the ACS shows a substantial and statistically significant increase in childhood poverty from 2008 (18.2 percent) to 2009 (20.0 percent).

Figure 25. No Statistically Significant Change in The Childhood Poverty Rate in Massachusetts Occurred From 2008 to 2009

Percentage of Population Living Below The Poverty Threshold



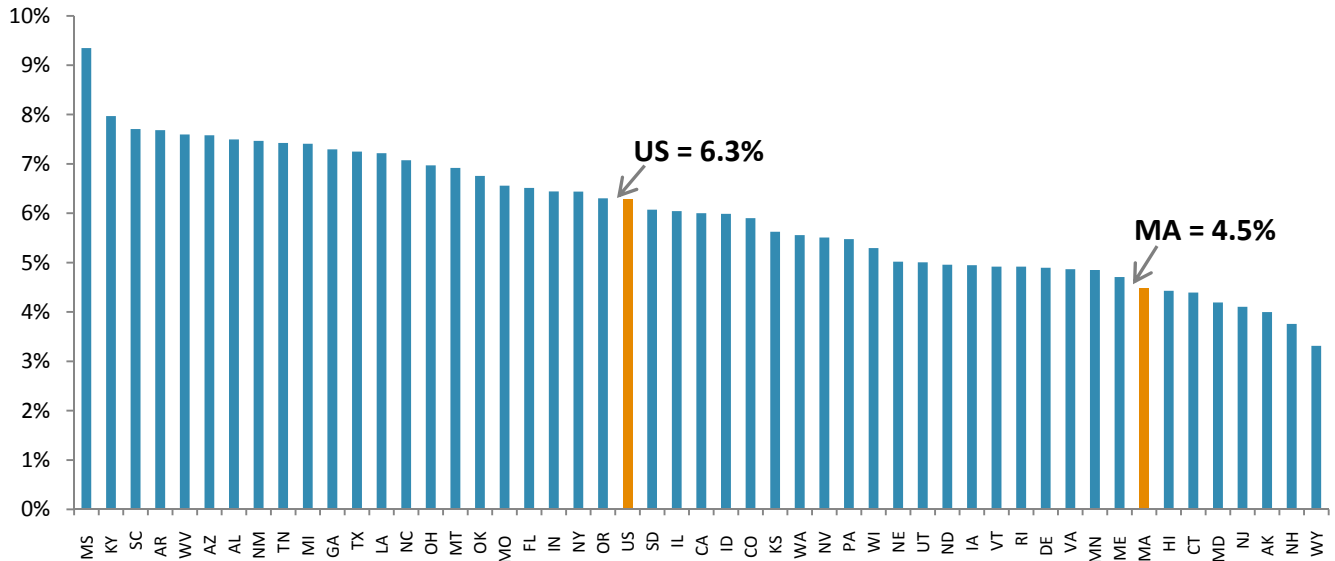
Source: Economic Policy Institute analysis of US Census Bureau data, American Community Survey 2000-2009

Another measure of poverty tracked by the Census Bureau is termed “deep poverty.” Deep poverty is defined as having an income of less than one half the official poverty threshold. In 2009, for a family of four, this would have meant an income below \$10,900.

Because of uncertainty about the precision of state-level estimates (due to smaller sample sizes at the state level) it is not possible to rank deep poverty rates among the states with precision. Nevertheless, it is clear that Massachusetts (at a rate of 4.5 percent) is among the 10 states with the lowest deep poverty rates in 2009. Even with this comparatively low rate, however, this means that some 285,000 people in Massachusetts were living in households with extremely low incomes.

Figure 26. Massachusetts Among The Ten States With The Lowest Deep Poverty Rates

Percentage of Population Living on Incomes Below Half The Poverty Threshold, 2009

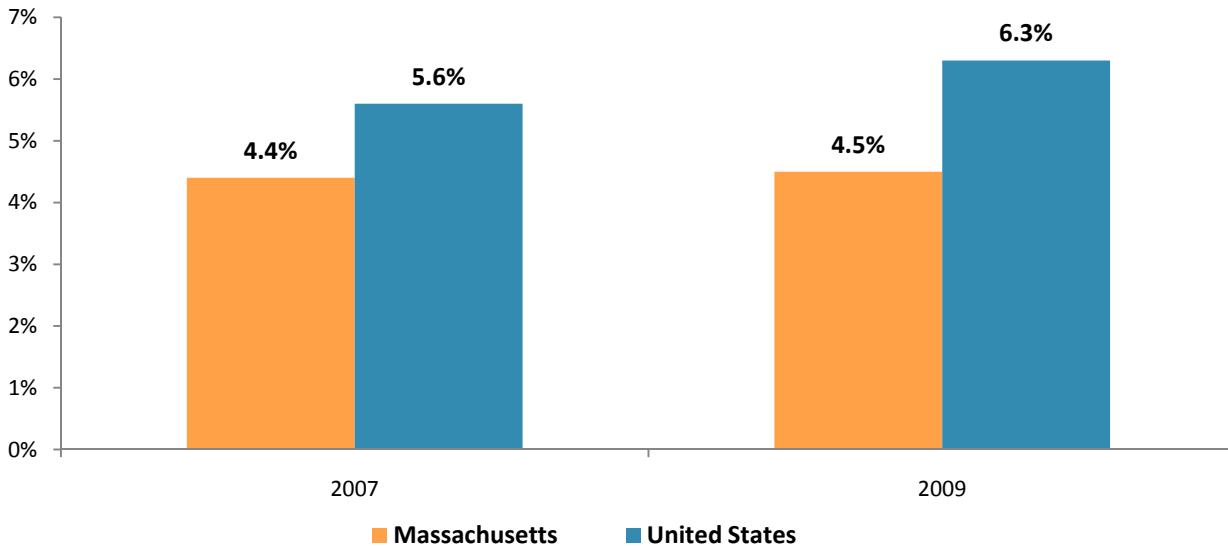


Source: Center on Budget and Policy Priorities analysis of US Census data, American Community Survey 2009

Relative to the rates for the nation as a whole, the recent trend in deep poverty rates in Massachusetts mimics the trend seen in overall poverty (“overall poverty” being households with incomes below 100 percent of the poverty threshold). During the first two years of the Great Recession (2008 and 2009) deep poverty underwent a statistically significant increase in the nation as a whole (from 5.6 percent to 6.3 percent). In Massachusetts, however, no statistically significant increase was observed over this period.

Figure 27. Despite Growth of Deep Poverty in US During Great Recession, There Was No Statistically Significant Change in Massachusetts

Percentage of Population Living on Incomes Below Half The Poverty Threshold, 2007 & 2009



Source: Center on Budget and Policy Priorities analysis of US Census data, American Community Survey 2007 & 2009

CONCLUSION

In looking at the State of Working Massachusetts in 2010 we have seen that the national economic crisis has caused real pain for families across the state. We have also seen that the Massachusetts workforce has significant strengths and that the Commonwealth is weathering this storm somewhat better than most of the nation. Over the past 30 years our workforce has become the best-educated in America, and we have become one of the highest-income states in the nation. We have also seen lower unemployment and less job loss than most states during this crisis. But there are significant segments of our population with very high unemployment rates and very low long-term wage growth. In the years ahead, Massachusetts faces the challenge of building on our strengths and enhancing the capacity of everyone in and entering our workforce to contribute effectively to our economic strength and to share in the benefits of a highly productive economy.

METHODOLOGICAL NOTES

- The poverty rate measures the percentage of people who live in households with incomes below a certain level, known as the poverty threshold. This threshold varies depending on the number of people in a family and their ages; it is updated each year for inflation. For 2009, the poverty threshold for a single person under the age of 65 was \$11,161; for a family of four with two children it was \$21,756; for a single parent with two children it was \$17,285. For purposes of determining the poverty rate, income is defined as all money income earned by a family, before taxes and excluding any non-cash benefits such as Medicaid or food stamps.

For poverty threshold figures see:

<http://www.census.gov/hhes/www/poverty/about/overview/measure.html>

- The poverty threshold does not vary from state to state. If the poverty threshold were adjusted to take differences among the states into account, it is likely that the poverty rate for Massachusetts would be higher, given the Commonwealth's high cost of living. For instance, a December 2003 study by two U.S. Census Bureau analysts found that the poverty rate in Massachusetts for the period 1999-2001 would have been 13.3 percent, rather than 10.2 percent, if the federal poverty threshold were adjusted to account for differences in housing prices.
- **Statistical Significance:** At various points in this analysis we refer to whether or not the difference between two estimates, usually from two years, is statistically significant. Because the CPS and ACS data are based on surveys of a random sample of individuals (meant to represent the entire state or nation), one cannot be certain that the estimate produced by the sample reflects the actual rate for the entire population. For each number they publish, the Census Bureau therefore includes a "margin of error" using a 90 percent confidence level, in effect, creating a range around its estimate. A "90 percent confidence level" means that there is a 90 percent likelihood that the true population measure falls within the margin of error or range established around the estimate.

When two estimates (for example, a single measure taken in two different years) are compared, we must determine how certain we are that any difference reflected in these estimates actually denotes a true difference in the real population. Using the margin of error we can calculate whether the two measurements reflect a true difference in the real population rather than an artificial difference occurring by chance in two random samples. When we say that two estimates do not show a "statistically significant difference," we therefore are saying that we cannot be certain that the estimates -- even though numerically different -- provide an accurate measure of a real difference in the true population.

Finally, it is important to note that the term "statistical significance" is a purely technical term and does not in any way refer to the relevance or "importance" of a given finding. If a survey provides a very large sample size, it may be possible to detect a very small -- and yet still statistically significant -- difference. Whether or not such a small difference holds any important meaning, however, is an issue that goes beyond the technical/mathematical matter of statistical significance.